

Supplemental Figures

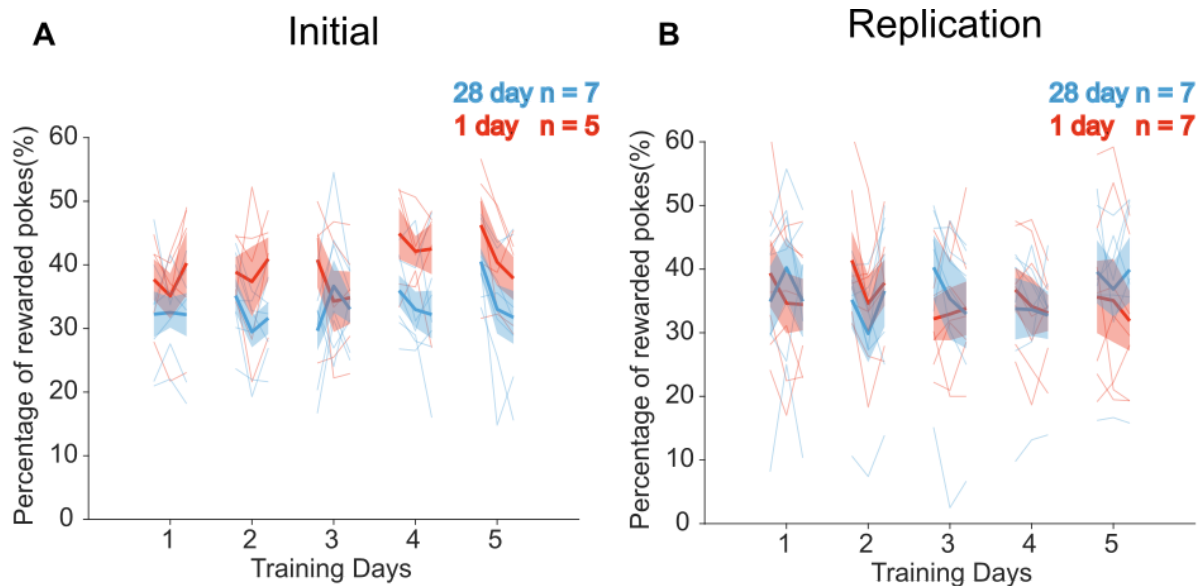


Figure S1. Animals from different delay groups did not exhibit differences in their performance during training prior to probing flexibility to action devaluations. A) In the initial experiment animals that underwent a 28 day delay did not exhibit differences in their percentage of rewarded pokes compared to 1 day delay animals during training. **B)** In the replication experiment animals that underwent a 28 day delay did not exhibit differences in their percentage of rewarded pokes compared to 1 day delay animals during training.

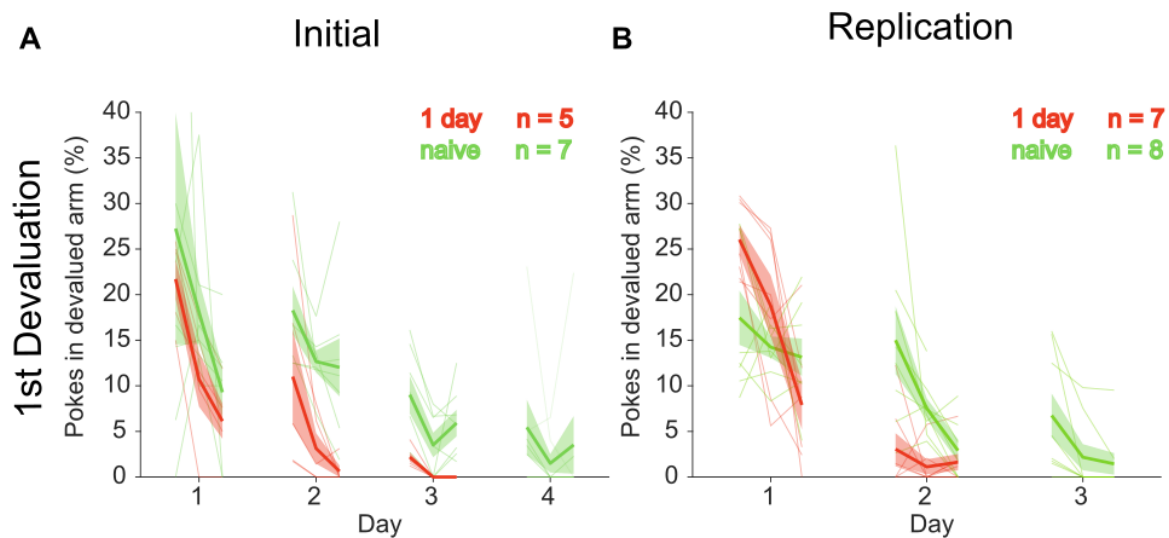


Figure S2. Naive animals and 1 day delay animals exhibit similar performance to action devaluation. A) In the initial experiment naive animals take only one more day to cease poking

in the devalued arm **B)** In the replication experiment naive animals take only one more day to cease poking in the devalued arm.

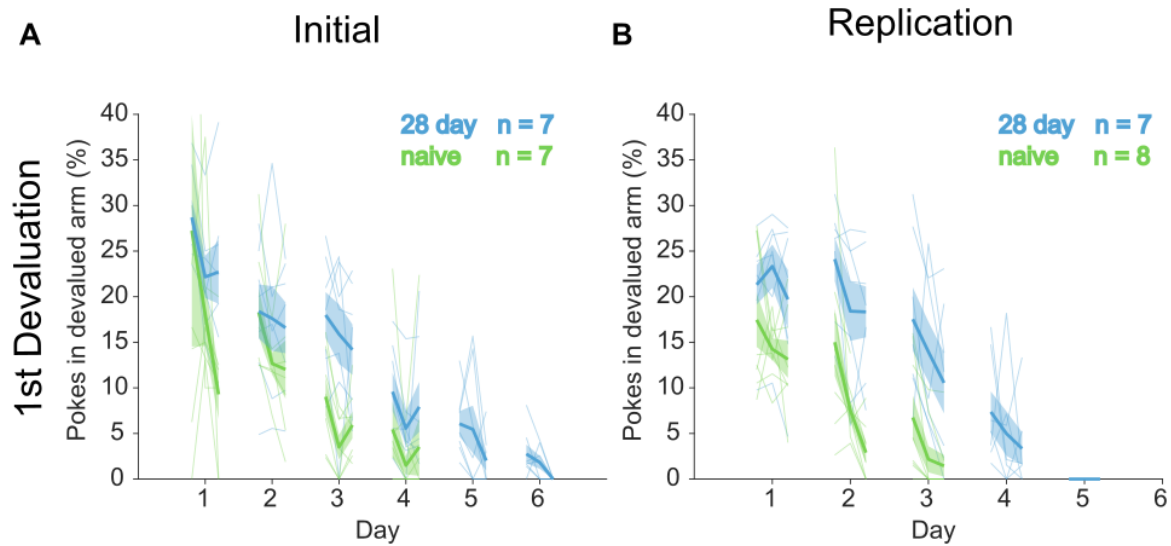


Figure S3. The impaired flexibility to action devaluations exhibited by 28 day delay animals is not the result of forgetting. A) In the initial experiment 28 day delay animals take much longer to cease poking in the devalued arm than naive animals with no prior training. **B)** In the replication experiment 28 day delay animals take much longer to cease poking in the devalued arm than naive animals with no prior training.

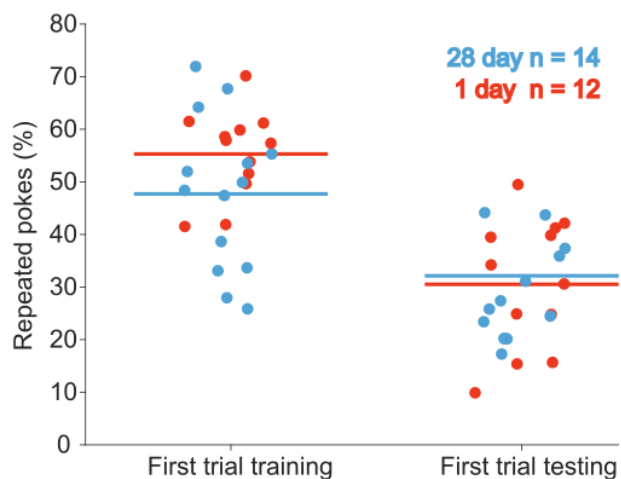


Figure S4. The impaired flexibility to action devaluations exhibited by 28 day delay animals is not the result of forgetting and relearning. Both delay groups exhibit a decreased percentage of repeated pokes on the first trial post-delay (testing).

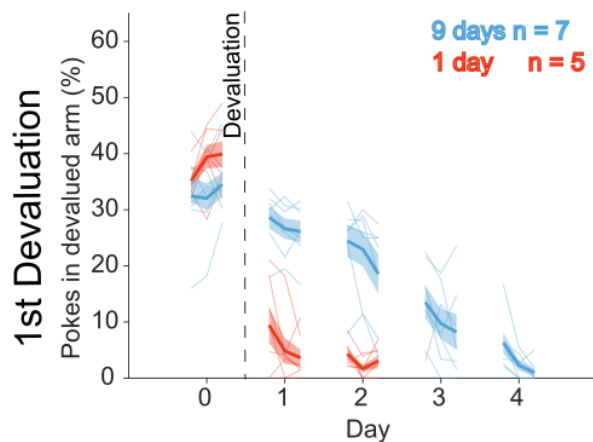


Figure S5. Consolidation may occur in the first weeks after learning. Animals that underwent a 9 day delay took significantly longer to cease poking in the devalued arm compared to 1 day delay animals.

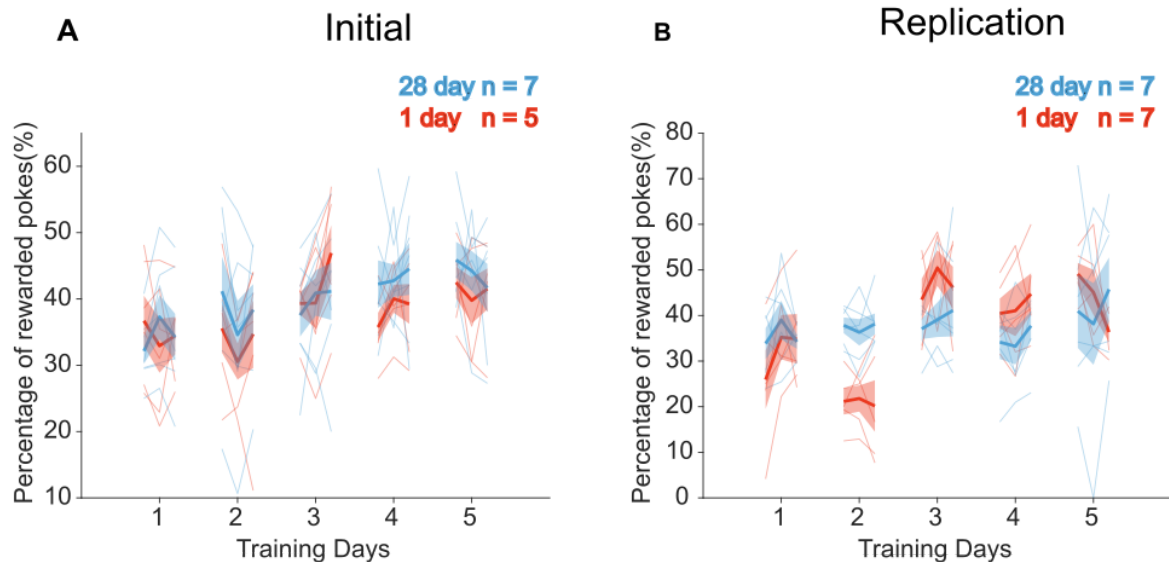


Figure S6. Animals from different delay groups did not exhibit differences in their performance during training prior to probing flexibility to changes in action sequence. A) In the initial experiment animals that underwent a 28 day delay did not exhibit differences in their percentage of rewarded pokes compared to 1 day delay animals during training. **B)** In the replication experiment animals that underwent a 28 day delay did not exhibit differences in their percentage of rewarded pokes compared to 1 day delay animals during training.

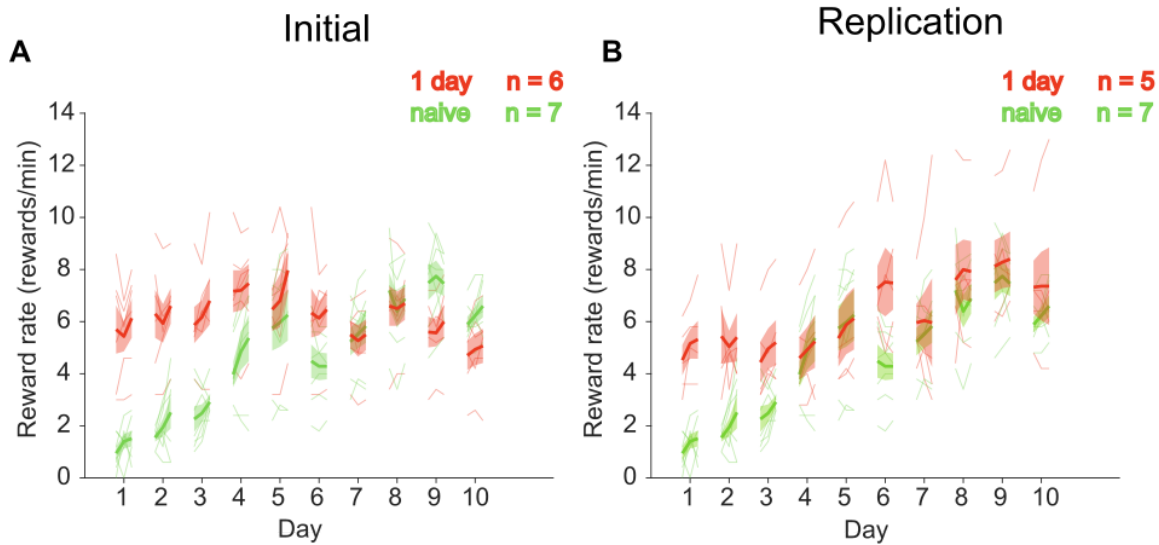


Figure S7. Naive animals are able to reach similar performance levels as 1 day delay animals to changes in action sequence. A) In the initial experiment naive animals were able to reach a similar percentage of rewarded pokes to 1 day delay animals. **B)** In the replication experiment naive animals were able to reach a similar percentage of rewarded pokes to 1 day delay animals.

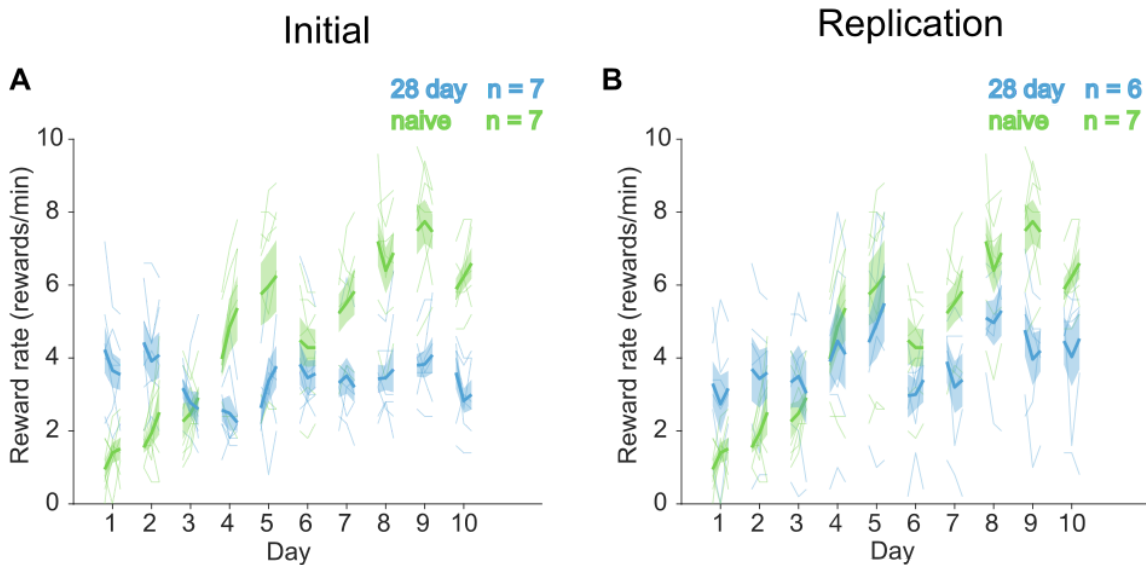


Figure S8. The impaired flexibility to changes in action sequence exhibited by 28 day delay animals is not the result of forgetting and relearning. A) In the initial experiment animals that underwent a 28 day delay could not reach performance levels of naive animals. **B)** In the replication experiment animals that underwent a 28 day delay could not reach performance levels of naive animals.

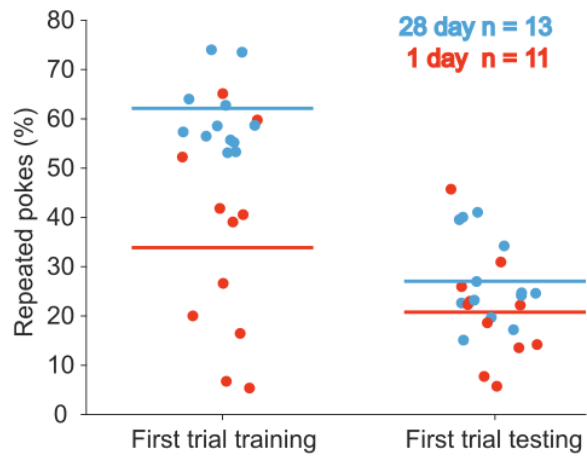


Figure S9. The impaired flexibility to changes in action sequence exhibited by 28 day delay animals is not the result of forgetting and relearning. Both delay groups exhibit a decreased percentage of repeated pokes on the first trial post-delay (testing).